CANDACE FLEMING DEENA SO'OTEH Marwhal Unicorn the Arctic

# **EDUCATORS' GUIDE**

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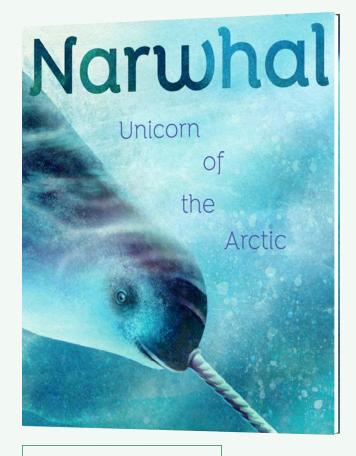


# **About the Book**

When winter ice covers the Arctic Ocean, a narwhal pokes his head through a patch of open water, his tusk—a six-foot long tooth—pointed to the sky.

Join this mammal as he jousts with another narwhal, floats with his pod, and uses echolocation to find his prey. When warmer weather arrives, he will migrate toward summer ground. But he must be careful! Predators—orcas and polar bears—will be hungry and looking for a meal. . . . How will the narwhal escape? Will he be able to return to the winter bay?

Paired with atmospheric illustrations by debut picture book illustrator Deena So'Oteh, nonfiction master Candace Fleming delivers a picture book, uniquely told in second person, that expertly explores the mysterious and fascinating unicorn of the Arctic.



**Themes:** Animals/Nonfiction, Science & Nature, Ecology & Conservation

### **About the Author**



Candace Fleming is the prolific and versatile award-winning author of many acclaimed books for children and young adults. Her most recent fiction picture book, *Mine!*, illustrated by Eric Rohmann, received two starred reviews. Her previous

collaboration with Rohmann, *Honeybee*, received seven starred reviews as well as the Robert F. Sibert Medal, and appeared on countless Best of the Year lists. Candace and Eric's other nonfiction picture book, Giant Squid, received three starred reviews, a Charlotte Zolotow Honor, a NCTE Orbis Picture Book Honor, a Robert F. Sibert Honor, and was a *Wall Street Journal* Best Book of the Year nod. Candace lives outside of Chicago.

## **About the Illustrator**



**Deena So'Oteh** holds an MFA in illustration as visual essay from the School of Visual Arts. Her extensive editorial and book cover work has been recognized by the Society of Illustrators, *American Illustration*, and 3x3 magazine. Her clients

include the New York Times, the Washington Post, and NPR. Narwhal is her

debut picture book.

Deena splits her
time between
New York City
and Switzerland.



# **Pre-Reading Activities**

- Set a purpose for reading. We are going to read about a species of toothed whale. Narwhal is the main title of the book. Under the title, it says, "Unicorn of the Arctic." This is called the subtitle. It tells readers more about the main topic of the book. What information about the narwhal can you learn from the subtitle? What do you know about unicorns? Where is the Arctic located? Let's find it on a map.
- Discuss the book cover. When Narwhal: Unicorn of the Arctic is opened, the image of the narwhal wraps around the front and back covers. Why do you think the illustrator chose to paint the narwhal in this way? Look at the font used on the cover. Why do you think the letters are curved at the top and bottom? When we open the book to the title page, we see a different image of the narwhal. What is it doing? What colors do you see? Do you have questions about the narwhal after viewing the cover and title page?

# **Discussion Questions**

- I. On the first page, author Candace Fleming writes, "You are a narwhal." Why do you think she wants you to pretend to be a narwhal? What can we learn about narwhals from this page? Why do you think the letters of the next words are smaller than the first line of text?
- 2. When the narwhal crosses tusks with another male narwhal, the text says it makes a *clackety-clack* sound. This is called onomatopoeia and helps us imagine the sound. Say "clackety-clack." Does it remind you of a sound you've heard before? Listen closely for more onomatopoeia as the story is read.
- 3. Other animals live in the Arctic. What animals do you see? How is the walrus like the narwhal?
- 4. Two pages are vertical rather than horizontal. Why do you think the illustrator, Deena So'Oteh, painted these pictures that make us tilt the book to read the text and see the illustration?
- 5. Using context clues, define *echolocation* in your own words.
- 6. The narwhal is a toothed whale, but the story says that the narwhal is toothless. Do narwhals have teeth? How do narwhals eat?
- 7. What does *migrate* mean? Why do the pods need to migrate by mid-June? How long did it take the pod to arrive at its summer grounds? How long do they stay?
- 8. Turn and talk to the person next to you about what you learned from this story. Did you feel like you were a narwhal? If so, in what ways?

- 9. Now that we've finished reading the story, let's do a picture walk. How did the illustrator's images focus your attention? What colors were used, and how did they make you feel? How did the illustrations add to what you were learning about the narwhal?
- 10. Candace Fleming has woven some interesting words throughout the text of Narwhal: Unicorn of the Arctic. Which words tickled your ear because of their sound or prompted you to pause and ponder their meaning?
- II. Let's read the backmatter to discover more about the narwhal. Why is reading nonfiction important? Has this book encouraged you to take action in any way?
- 12. Before rereading the story, have students fold a piece of paper into four sections. Pause at different points in the book so students can draw a quick sketch to illustrate key ideas and details about the narwhal. These drawings can then be discussed in pairs or small groups.



# **Extension Activities**

These extension activities support and enhance children's awareness of lyrical language in narrative nonfiction picture books, allow children to demonstrate and display comprehension of the text and illustrations, generate and increase background knowledge about narwhals and climate change, and encourage and motivate inquiry around STEM topics.

#### 3-2-1 Think and Share

Ask students to write or draw

- Three facts they learned about the narwhal
- Two questions bubbling up about the text or illustrations
- One thing they will never forget about *Narwhal*: *Unicorn of the Arctic*

Next, students can share what they have written or drawn to spark further connections and conversations.

#### **Questions to Pose and Ponder**

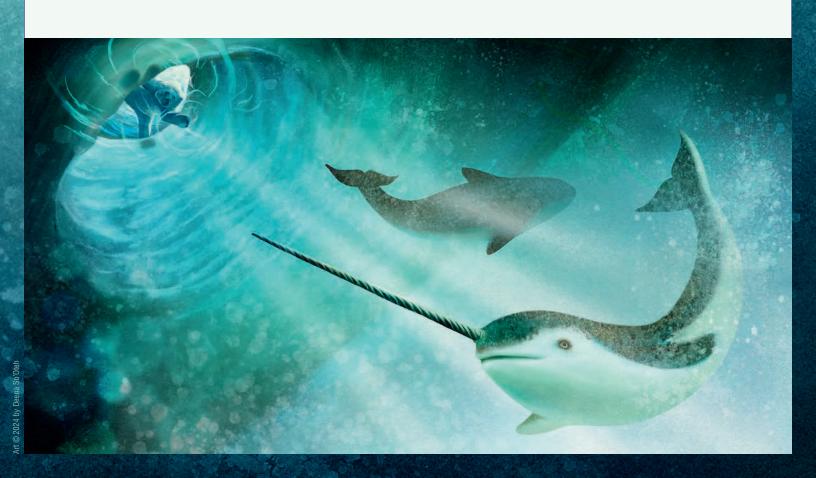
When reading nonfiction, children often pose questions. Provide students time to generate questions that follow a specific structure: a question about the title, a question that begins with "why," a question about an important detail in the text or illustration, a question about an interesting or unfamiliar word, and a question that begins with "what." Once children create their questions, have them work in teams to pose them to another student.

#### **Word Scavenger Hunt**

Divide students into small groups. Provide a copy of *Narwhal: Unicorn of the Arctic* for each group, if possible, or project each page for all groups to view. Create a worksheet or have students fold a piece of paper into six squares. Encourage students to pay close attention to the text as they view the pages or as the book is read aloud to identify words that fit each criterion:

- New word
- Action word
- Makes a sound
- Animal name (other than narwhal)
- Describes a narwhal
- Tickles your ear

As groups share their words, create a word cloud or write each word on a strip of paper to generate a word wall devoted to the narwhal and other animals in the Arctic.



#### **Observing Melting Glacial Ice**

Climate change causes temperature variations. As temperatures rise, glaciers are melting faster than they can accumulate new ice. To demonstrate why this is happening, conduct a science experiment using two identical plastic containers, ice cubes, room-temperature water, food coloring, and a stopwatch.

- Place an equal number of ice cubes in each container (ice cubes made with food coloring make it easier to observe the ice melting).
- 2. Add a small amount of water to one of the containers.
- 3. Ask students to write their prediction for which ice cubes will melt faster—those with water added to the container or those without water.
- 4. Set the stopwatch. View the containers every few minutes and have students write down what they are observing. Be sure they record how much time has passed.

Water in the container will cause the ice to melt faster. Ask students why they think this happened. View the NASA animation of melting glaciers for students to understand the impact of water on ice and why warm temperatures are impacting climate change.

#### **Popcorn Reading Response**

Provide the following sentence starters to encourage students' written responses to *Narwhal: Unicorn of the Arctic.* 

- I wonder why . . .
- I can't believe . . .
- I noticed . . .
- I think . . .
- Lobserved . . .
- I liked the way the author . . .
- I liked the way the illustrator . . .
- I was surprised . . .
- I began to think of . . .

Once students have generated their sentences, engage in a popcorn reading where students "pop up" to stand and read what they have written.

# CLAPS: C (Character) L (Location/Setting) A (Action) P (Problem) S (Solution)

Candace Fleming created the CLAPS strategy to support students' writing. This strategy can also be used to notice and note different story elements and information presented in the backmatter. Using the five categories, create a chart. For example:

Character	Location/Setting	Action	Problem	Solution
Narwhal	Arctic Ocean/ December	Jousting	Potential injury	Swim away
Narwhal pod	Deep in the ocean	Diving	Hunger	Eating Greenland halibut

This chart enables students to consider the actions of the narwhal. They can also discuss how the narwhal has changed its behavior in response to different problems, including the effect of climate change.



#### Diamante Poem

Create a diamante poem as a class to model how to use nouns, adjectives, and verbs. Identify words from the narrative text or backmatter of Narwhal: Unicorn of the Arctic or those students generate from further research. Diamante poems have seven lines that form the shape of a diamond and use the structure:

Line 1: One word - Noun (names the subject of the poem)
Line 2: Two words—Adjectives
 Line 3: Three words—Verbs (ending in -ing)
Line 4: Four words—Nouns
 Line 5: Three words—Verbs
Line 6: Two words—Adjectives
Line 7: One word—Noun

After creating a diamante poem together, students can create their own narwhal poem with information from other books, websites, or videos. Students can also write about another subject they have read about in a nonfiction book.

## **Websites Containing Photos and Information About Narwhals and Climate Change**

- National Geographic Kids kids.nationalgeographic.com/animals/mammals/facts/narwhal
- World Wildlife Organization worldwildlife.org/stories/unicorn-of-the-sea-narwhal-facts
- Arctic Eider Society arcticeider.com/education-outreach/home-school/nwi
- NASA Climate Kids climatekids.nasa.gov/climate-change-evidence
- Video: National Geographic WILD youtube.com/watch?v=MXsZgIsQYvA



This guide was written by Cyndi Giorgis, a Professor of Literacy Education and Children's Literature in the Division of Educational Leadership & Innovation in the Mary Lou Fulton Teachers College at Arizona State University. Cyndi has served on several ALA and NCTE Award Committees over the years.



